

associated with the protective impact of UPH on POD while considering the adverse effects associated with UPH.

**DEVELOPMENT OF A DISCHARGE SCORING TOOL IN THE POST ANESTHESIA CARE UNIT**



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**Introduction:** Current criteria at MSKCC for discharging a patient from the Post Anesthesia Care Unit (PACU) depends on clinical judgement and several variables. Patients are often kept in the PACU for a specific amount of time without supported evidence.

**Identification of the problem:** The Post-Anesthetic Care Guidelines of the American Society of Anesthesiologists states that mandatory length of stay (LOS) should not be required and supports the use of an objective criteria. Delay in discharge from the PACU may lead to a delay in meeting their expected milestones after surgery. The lack of specific objective criteria does not permit quantification of discharge readiness.

**Purpose of the Study:** The goal of this project is to develop a discharge scoring tool that will incorporate the special needs of the surgical oncologic patients and quantify when these patients are clinically ready for discharge from the PACU.

**Methodology:** We reviewed tools in use at other institutions and conducted an extensive review of literature to develop our specialized discharge tool. To substantiate our tool, the MSKCC Institutional Review Board approved a retrospective study which included 135 consecutive patients who underwent major thoracic, hepatic or pancreatic surgery from January to March 2015.

**Results:** For each surgical group the difference in mean LOS between current practice and the proposed criteria ranged from 9.15 hours to 11.8 hours, which was statistically significant ( $p < 0.0001$ ). During the extended time in the PACU (after a patient met an acceptable score), there were no clinical events in 68% of thoracic, 64% of hepatic and 54.3% of Whipple patients. Common clinical events that occurred in the remaining percentiles after proposed criteria was met were not emergent and routinely managed on the inpatient units.

**Discussion:** Utilizing our tool provides a standard approach and patient-centered focused care to our post-anesthetic oncologic patients without compromising patient safety.

**Conclusion:** By changing current practice, our tool allows our patients to be discharged when clinically ready, eliminating the lack of specific objective criteria and presumptions.

**Implications for perianesthesia nurses and future research:** We recognize the importance of standardized practice and individualized patient factors when assessing patients for discharge readiness. Future research is needed to measure the effects and outcomes of our discharge scoring tool and discharge criteria.

**MULTISESSION EDUCATION IMPROVES NURSES' KNOWLEDGE AND CONFIDENCE FOR MALIGNANT HYPERTHERMIA CRISIS**



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**Introduction:** Malignant hyperthermia (MH) is a rare genetic skeletal muscle disorder that when a patient is exposed to volatile inhalation agents and/or succinylcholine, can cause a potentially lethal condition. It is important to educate PACU nurses to foster confidence and preparedness when working with these patients. Prompt recognition and treatment is paramount for a patient to survive a MH crisis. Previous staff education has proven effective in enhancing nursing knowledge and led to positive patient outcomes.

**Identification of the problem:** PACU nurses have expressed their concern to learn more about MH and become more familiar with the unit's MH cart contents.

**QI Question / Purpose of Study:** The purpose of this poster is to report the knowledge and confidence of nurses' preparedness with MH after a series of education sessions.

**Methods:** Learning opportunities were provided in-person to PACU nurses multiple times from 2016-2018. There were total of four education opportunities that were successfully provided to staff by experts which included lectures, test of knowledge, scavenger hunt of the MH cart and familiarizing with Malignant Hyperthermia Association of the United States (MHAUS) website. A post education survey was sent to staff at the end of all the opportunities to measure its success in increasing their knowledge, preparedness and confidence.

**Outcomes/Results:** The learning opportunities were overall successful. Most of the PACU nurses attended all of the education sessions. The average posttest grade was 95.4%. One hundred percent of the survey respondents reported better understanding of MH and confidence in recognizing its signs and symptoms if MH crisis occurs.

**Discussion:** The results of the posttest and post education survey revealed increased in knowledge, confidence and preparedness of PACU nurses. In-person education proved to be an effective intervention.

**Conclusion:** This provides compelling evidence that multiple learning opportunities improved nursing knowledge and confidence for MH crisis.

**Implications for perianesthesia nurses and future research:** Malignant hyperthermia staff education offered multiple times in multiple ways is feasible and effective to improve knowledge, confidence, and preparedness of PACU nurses.

**INCREASING COMPETENCE OF PACU RNS RESPONDING TO CODE BLUE**



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*Note: All abstracts are printed as received from the authors.*

**Introduction:** Cardiopulmonary arrest (Code Blue) remains a high risk, low frequency event in Post-Anesthesia Care Units (PACUs). Literature denotes that healthcare facilities should implement Code Blue refresher programs to bridge the gap amid initial and recertification of Advanced Cardiac Life Support (ACLS) and Basic Life Support (BLS) skills due to the loss of knowledge in as little as two weeks after certification.

**Identification of the problem:** A gap analysis revealed that PACU RN's compliance to the American Heart Association (AHA)'s ACLS and BLS guidelines during mock Code Blues were suboptimal.

**QI question/Purpose of the Study:** The purpose of this project was to increase PACU RN's compliance and competence in ACLS and BLS skills while responding to Code Blues.

**Methods:** Baseline assessment of PACU RN Code Blue response was completed during mock Code Blue drills using a forty-six item standardized observation tool. Areas of opportunity led to the creation of monthly ACLS refresher workshops focusing on teamwork, ACLS algorithms, medication management, BLS skills, and in-situ Code Blue drills. Participant performances were re-evaluated using the same tool following the workshops during mock Code Blue drills several weeks after the last workshop.

**Outcomes/Results:** Initial assessment revealed a 33.4% Code Blue management compliance, whereas the post-intervention score increased to 92.2%. Tachycardia and bradycardia algorithm adherence increased from 28% to 91.2% and 21.4% to 81%; BLS adherence increased from 40.6% to 96%. Furthermore, 64.3% of participants initially met AHA's guidelines for initiating chest compressions; however, after intervention 100% of the participants initiated chest compression post-intervention appropriately.

**Discussion:** The AHA emphasizes the importance of ACLS and BLS skills in the chain of survival. BLS components such as: quality and timing of chest compressions, and ventilation skills improved significantly as did the adherence to ACLS guidelines. The PACU RN's response to cardiac arrest and deteriorating patient conditions using ACLS standards indicate that reinforcing ACLS skills leads to increase in knowledge.

**Conclusion:** ACLS workshops between recertification times improved PACU RN Code Blue response competence.

**Implications for perianesthesia nurses and future research:** ACLS refresher programs should be implemented in PACUs to bridge knowledge gaps between certification and recertification. Reinforcement of AHA guidelines lead to an increase in competence in Code Blue management, in-hospital cardiac survival rates, and improved patient outcomes.

#### **PACU CRITICAL CARE PROGRAM: INCREASING PRECEPTOR KNOWLEDGE AND CONFIDENCE TO FOSTER FUTURE GENERATIONS OF RNS**



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**Introduction:** An academic medical center's Post-Anesthesia Care Units (PACU) have increased bed space due to increasing surgical volume, patient acuity, and lack of Intensive Care Unit (ICU) beds. Often patients in the PACU require ICU care, requiring an increased stay in PACU due to increased monitoring requirements and medical interventions to stabilize patients postoperatively.

**Identification of the problem:** Additional Critical Care (CC) training was evident as PACU Registered Nurses (RN) voiced widespread lack of confidence and knowledge in caring for post-surgical ICU patients. Providing CC education to all current PACU RNs is as unrealistic as it is time consuming and cost ineffective.

**QI question/Purpose of the study:** The project's goal was to create a program that increases CC knowledge and confidence levels in the PACU RN preceptors, who mentor and precept new employees, meanwhile mentoring current PACU staff.

**Methods:** A four class series, increasing in difficulty was completed over several months to allow the participants to learn and apply the concepts in small increments to maximize learning. Concepts included: post-surgical patient assessment, device management of various pacemakers, external ventricular devices, hemodynamics, lab interpretation and post-surgical complication management. Instruction consisted of didactic lectures and High Fidelity Simulation (HFS). A fifty-question pre and post intervention CC knowledge test and a thirteen-question Likert scale confidence survey measured the effectiveness of the program. Furthermore, a forty-item RAPIDS-Tool was used on day one and on the final day during HFS to evaluate participants' performance rescuing a patient's deteriorating condition.

**Outcomes/Results:** Confidence levels increased from 3.14 to 4.14 noting a 20.1% increase. The CC knowledge score increased by 27.4%. Additionally, the RAPIDS-Tool score increased from 15.3 to 36.5, noting a 53.1% score increase.

**Discussion:** Results indicate that the CC class improved confidence and knowledge; most importantly, it improved assessment skills and response to deteriorating patients. Participants voiced their intent to teach learned CC concepts to new employees and colleagues.

**Conclusion:** CC Concepts Program improved participants' confidence, knowledge and response to deteriorating patients.

**Implications for perianesthesia nurses and future research:** Including the CC program to PACU preceptor programs may benefit all PACU RNs via confident PACU preceptors/ mentors who share their new knowledge with other staff members caring for critical PACU patients.

#### **BEDSIDE HANDOFF BETWEEN THE PERI-ANESTHESIA CARE UNIT AND MEDICAL-SURGICAL UNIT**



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**Introduction:** This evidenced-based practice (EBP) project was instituted after noting many rapid response activations (RRT's) on the medical-surgical unit in a community hospital in the greater Boston area.